

89/254/19

ABSTRACT

A semiconductor device (1) comprising electrodes
formed on a semiconductor chip (2) and bumps (3) which
5 consist of a low melting point metal ball spherically
formed and having a given size and which are adhesive
bonded to the electrodes (5). The electrodes (5) are
formed from an electrode material of Cu or a Cu alloy, Al
or an Al alloy, or Au or a Au alloy. When the electrode
10 material is composed of Al or an Al alloy, the electrodes
contain, on the electrode material layer of Al or an Al
alloy, at least one layer (6) composed of a metal or metal
alloy (preferably a metal selected from Ti, W, Ni, Cr, Au,
Pd, Cu, Pt, Ag, Sn or Pb, or an alloy of these metals)
15 having a melting point higher than the electrode material.
The low melting point metal balls (3) are adhesive bonded
to the electrodes (5) preferably with a flux. The low
melting point metal balls (3) adhesive bonded to the
respective electrodes (3) may also be reflowed to form
20 semispherical bumps (10) before use.